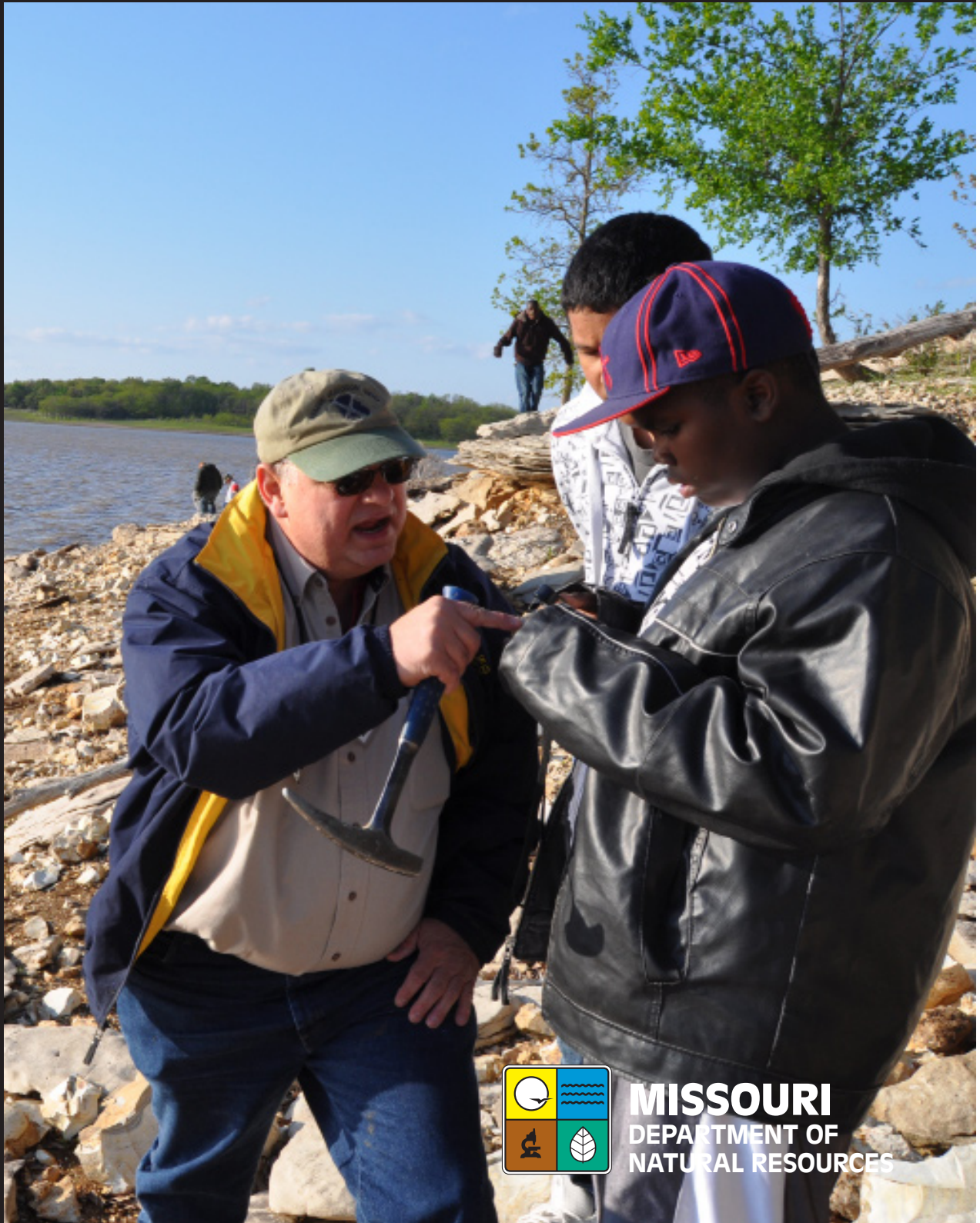


Hazardous Waste Management Commission Report

October through December 2011

Quarterly Report



MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

A Missouri Department of Natural Resources employee works hands on with students participating in the Science Camps.

Hazardous Waste Management Commissioners

James T. "Jamie" Frakes, Chair

Andrew Bracker, Vice-Chair

Elizabeth Aull

Michael R. Foresman

Charles "Eddie" Adams

Deron Sugg

"The goal of the Hazardous Waste Program is to protect human health and the environment from threats posed by hazardous waste."

For more information

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Hazardous Waste Program

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Past issues of the Hazardous Waste Management Commission Report are available online at
dnr.mo.gov/env/hwp/quarterlyreport.htm



**Missouri Department of Natural Resources
Hazardous Waste Program**

December 2011 Program Update

Challenges? Sure, there were plenty in 2011. But even with the unexpected trials that seem to accompany hazardous waste issues, the Hazardous Waste Program realized many, many successes. Some of our 2011 successes were:

UST ARRA Project Completion: The Tanks Section submitted the final report for the American Recovery and Reinvestment Act, Leaking Underground Storage Tank project in April, ahead of the September deadline. The approximately \$3.254 million in recovery act funds the department received for this project was used to conduct assessments, site characterizations and cleanup activities at more than 60 abandoned tank sites.

Long-Term Stewardship Activities: The Hazardous Waste Program launched a Long-Term Stewardship Unit within the Brownfields/Voluntary Cleanup Program. This consolidated "one-stop shop" for long-term stewardship is intended to address the program's obligation to provide stewardship for the 500+ (and growing) Missouri properties that have undergone risk-based cleanups in various cleanup programs.

New Operational Tanks Rules: The Hazardous Waste Program successfully completed revisions to the underground storage tank operational regulations. These regulations had not been updated in more than 20 years.

Hazardous Waste Fee Extended: Missouri Hazardous Waste Fees and the Battery Fee sunsets were extended from Dec. 31, 2011 to Dec. 31, 2013. These fees apply to all Missouri hazardous waste generators and permitted treatment storage and disposal facilities.

The Drycleaner Environmental Response Trust Fund sunset was extended to Aug. 28, 2017.

Brownfield's Milestones: Since its inception in 1994, the Brownfields/Voluntary Cleanup Program has provided oversight for the cleanup of more than 6,000 acres of land put back to productive use and issued 636 Certification of Completion letters.

The Drycleaning Environmental Response Trust Fund Unit exceeded the \$1.5 million mark in reimbursements of eligible costs to its participants during 2011.

Hazardous Waste Forum: We reinvigorated our Hazardous Waste Forum and held seven meetings during 2011.

The daily tide of work and priorities often pulls us away from celebrating our successes. But the dedicated staff I get the pleasure to work for and with don't keep plugging away for pats on the back. They believe in something much larger than themselves. They believe in the department's mission, in the program's mission.

And with that, I want to take the opportunity to thank the staff of the Hazardous Waste Program and the Hazardous Waste Management Commission for a successful 2011. I look forward to what we can accomplish in 2012.

Sincerely,



David Lamb

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Missouri Department of Natural Resources - Hazardous Waste Program

Pilot Science Camps

Debbie Brunner, the department's education coordinator, met Mike Szydlowski, K-12 Science Coordinator for Columbia Public Schools, at an education conference. It didn't take long before they explored the possibility of Columbia participating in a department pilot science camp. Szydlowski has taken students to the Grand Tetons and Yellowstone National Park, so he jumped at the chance to provide his new district with environmental education.

Department staff began developing a course description and brochure for the teachers at Lange Middle School in Columbia. Science teachers at Lange received the camp brochure that included a list of potential classes and selected four to be taught during their camp. The classes included Energy, Hazardous Waste, Air Quality, Water Quality, Solid Waste, Soil and Water Conservation, Geology and Land Survey and Historic Preservation.

A teacher advisory committee was created to help develop a curriculum guide for department employees to follow while teaching their subject material. Nine educators met with Brunner in October to discuss the curriculum design for the camp pilot.

Students in Missouri are tested in science at the end of 5th and 8th grades. Missouri schools have the option of teaching earth and life sciences in 7th or 8th grade. It was decided by the Education Committee that schools should have the choice of sending 7th or 8th graders to camp. The educators all agreed the camp should be taught by natural resource experts from the department and the curriculums should align with Missouri's state educational standards.

The pilot department science camps offered 678 students from Columbia an opportunity to learn about their natural, cultural and energy resources in a beautiful Missouri State Park. At the same time, the camps hosted 96 adults, which includes the teachers and parent chaperones. The nine camps took

place at Mark Twain State Park and Lake Ozark State Park.

Feedback from the students and teachers was overwhelmingly positive.

The department will be holding one more pilot camp in May 2012.



The Missouri Department of Natural Resources issued certificates of completion for four Brownfields/Voluntary Cleanup Program sites during October through December.

Brownfields are real property, the expansion, redevelopment or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant or contaminant.

Through the Brownfields/Voluntary Cleanup Program, private parties agree to clean up a contaminated site and are offered some protection from future state and federal enforcement action at the site in the form of a “No Further Action” letter or “Certificate of Completion” from the state.

Loughborough Commons - Outparcel E - St. Louis

The Missouri Department of Natural Resources’ Brownfields/Voluntary Cleanup Program issued a Certificate of Completion for the Loughborough Commons - Outparcel E site, located at 950 Loughborough Ave. in St. Louis. Outparcel E of the Loughborough Commons site was formerly the location of the Phelen Faust Paint Manufacturing Co. While researching historical uses of the site, it was discovered several oil and gasoline tanks had been used. A Nordyne Inc. facility was also across the street from Outparcel E and manufactured heating and cooling machinery.

Initial site characterization of the Loughborough Commons Site identified the presence of petroleum and lead contamination in the soil above the Missouri Risk-Based Corrective Action, or MRBCA, default target levels. Groundwater analysis identified the presence of petroleum hydrocarbons in excess of the target levels.

Site investigations showed levels of petroleum products, lead and mercury above the Missouri Risk-Based Corrective Action default target levels in soil and groundwater at the Loughborough Commons site. A risk assessment was conducted that demonstrates contaminants on Outparcel E of the Loughborough Commons site are below the MRBCA target levels for residential use. The department determined the site is safe for its intended use.

Outparcel E is part of the larger Loughborough Commons site developed into a retail center.

Farm and Home Savings Association Building – St. Louis

The Missouri Department of Natural Resources’ Brownfields/Voluntary Cleanup Program issued a Certificate of Completion for the Farm and Home Savings Association Building site, located at 1001 Locust St. in St. Louis. The building is a vacant, six-story structure with a basement and attic. Past uses of the building were mostly office spaces, retail and residential. It was most recently used as the Farm and Home Savings Association headquarters. Contaminants include asbestos-containing material, lead-based paint, fluorescent bulbs and ballasts, mercury in thermostats and various quantities of misc chemicals (e.g., paints, cleaners, solvents). Owners intend to develop site into retail spaces and residential lofts.

The Farm and Home Savings Association Building project included removal of asbestos-containing material, except for a pre-existing vapor barrier (tar paper) on the first through sixth floors located beneath the new concrete and a layer of wood floor. Lead-based paint in the building was addressed by demolition and encapsulation techniques. All painted surfaces within the building were assumed to contain lead-based paint for the purposes of demolition. The structural columns, core and perimeter

Missouri Department of Natural Resources - Hazardous Waste Program Brownfields/Voluntary Cleanup Section

walls remained in place after demolition activities on the first through sixth floors. All core and perimeter walls that remained in place were scraped flush to the substrate and tested negative for lead-based or encapsulated. Most of the main subfloors of the building contained acoustical fly ash fill material containing lead located between wooden floor joists and was encapsulated with concrete ceilings and floors. The department determined the site is safe for its intended use.

In December 2008, the owner of this site was awarded more than \$603,000 in Brownfields Remediation Tax Credits.

Sam's Fina Service (former)

The Missouri Department of Natural Resources' Brownfields/Voluntary Cleanup Program issued a Certificate of Completion for the Sam's Fina Service (former) site, located at 4190 Delmar Blvd. and 619 N. Whittier St. in St. Louis. The Land Reutilization Authority of St. Louis has owned the site since 2001 and took title by quit claim deed as the result of tax foreclosure. Environmental site assessments indicate the site was used as a filling station and automobile repair facility between 1938 and 1995.

Site investigations revealed the presence of petroleum contaminated soil and groundwater at the site had adversely affected the subsurface. Approximately 1,548 tons of petroleum impacted soil and six underground storage tanks were removed and were properly disposed off-site. Results from the groundwater monitoring events indicate petroleum contamination is not present on the site above the Residential Land Use Risk-Based Target Level, Indoor Inhalation of Vapors, for Type 1 soils. The department determined the site is safe for its intended use.

The city intends to reuse the site for residential purposes.

Sisters of the Most Precious Blood Convent – O'Fallon

The department's Brownfields/Voluntary Cleanup Program issued a Certificate of Completion for the Sisters of the Most Precious Blood Convent site, located at 204 North Main St. in O'Fallon. The site has been a convent for the Sisters of the Most Precious Blood since 1872. It consists of eight former convent and senior citizen housing buildings constructed between 1872 and 1976. Asbestos-containing materials and lead-based paint were detected in the buildings, including friable asbestos in excess of the regulated threshold. Fluorescent lightbulbs and ballasts, older air conditioners containing freon, a medical facility, printing presses, transformers and hydraulic machinery were also at the site.

Asbestos-containing material, lead-based paint and miscellaneous hazardous materials were identified in the buildings. Most of the asbestos-containing material and lead-based paint and all the miscellaneous hazardous materials were removed and properly disposed of, but some asbestos-containing material and lead-based paint was left in place.

Asbestos-containing material left in place was enclosed and lead-based paint was either enclosed or covered with an encapsulant. An operations and maintenance plan that governs inspection and maintenance of remaining asbestos-containing material and lead-based paint was filed in the chain of title for the property. Sampling was also conducted to assess possible releases from a transformer, hydraulic lift and elevator oil reservoir. No contamination above action levels was found. The department determined the site is safe for its intended use.

The Sisters of the Most Precious Blood Convent has been redeveloped into The Village of St. Mary's. This community will provide senior apartments, assisted living and skilled nursing care to both the Sisters and seniors in the area. The redevelopment was aided by Brownfields remediation tax credits from the Missouri Department of Economic Development.

Sites in Brownfields/Voluntary Cleanup

	Active	Completed	Total
OCTOBER	268	635	903
NOVEMBER	269	635	904
DECEMBER	266	637	903

New Sites Received

October

Reed Rubber Company (former), St. Louis
 Gotham Apartments, St. Louis
 Kirksville Toastmaster Site,
 Victorian Manor - O'Fallon, O'Fallon

November

Mr. Furniture, Springfield

December

History Museum - Springfield, Springfield
 Horace Mann School, Kansas City

Sites Closed

October

Loughborough Commons - Outparcel E, St. Louis
 Farm and Home Savings Association Building, St. Louis

November

December

Sam's Fina Service (former), St. Louis
 Sisters of the Most Precious Blood convent, O'Fallon

Missouri Department of Natural Resources - Hazardous Waste Program

Brownfields/Voluntary Cleanup Section

Drycleaning Environmental Response Trust Fund

The department's Drycleaning Environmental Response Trust, or DERT, Fund provides funding for the investigation, assessment and cleanup of releases of chlorinated solvents from dry cleaning facilities. The two main sources of revenue for the fund are the dry cleaning facility annual registration surcharge and the quarterly solvent surcharge.

Registrations

The registration surcharges are due by April 1 of each calendar year for solvent used during the previous calendar year. The solvent surcharges are due 30 days after each quarterly reporting period.

Calendar Year 2010	Active Dry Cleaning Facilities	Facilities Paid	Facilities in Compliance
Jan. - March 2011	221	113	51.13%
April - June 2011	221	186	84.16%
July - Sept. 2011	221	202	91.40%
Oct. - Dec. 2011	221	207	93.67%

Calendar Year 2011	Active Solvent Suppliers	Facilities Paid	Suppliers in Compliance
Jan. - March 2011	11	10	90.91%
April - June 2011	11	11	100%
July - Sept. 2011	11	11	100%
Oct. - Dec. 2011	11	9	81.82%

Cleanup Oversight

Calendar Year 2011	Active	Completed	Total
Jan. - March 2011	23	9	32
April - June 2011	23	9	32
July - Sept. 2011	21	10	31
Oct. - Dec 2011	22	10	32

New Sites Received

November

Ma Ma Bessie's Cleaners (former), Columbia

New Sites Closed

No new sites closed

Reimbursement Claims

The applicant may submit a reimbursement claim after all work approved in the work plan is complete and the fund project manager has reviewed and approved the final completion report for that work. The fund applicant is liable for the first \$25,000 of corrective action costs incurred.

	Received	Under Review	Paid/Processed
October	3	9	2
November	2	5	2
December	5	5	3

	Received	Under Review	Paid/Processed
October	\$19,596.50	\$82,602.11	\$41,429.20
November	\$747,562	\$124,966.12	\$13,087.76
December	\$56,703.60	\$31,796.10	\$15,128.50

Reimbursement Claims Processed:

American Cleaners - Dorsett Rd.	Maryland Heights	\$1,434
American Cleaners - University City	University City	\$13,087.76
Busy Bee Laundry	Rolla	\$34,411.46
Yorkshire Cleaners	Marlborough	\$8,800

DERT Fund Balance as of Dec. 31, 2011: \$1,511,844.20

Missouri Department of Natural Resources - Hazardous Waste Program Compliance and Enforcement Section

Inspections and Assistance

Regional Office Hazardous Waste Compliance Efforts

- Conducted 145 hazardous waste generator compliance inspections:
 - 12 at large quantity generators.
 - 79 at small quantity generators.
 - 48 at conditionally exempt small quantity generators.
 - Six at E-waste recycling facilities.
- Conducted six compliance assistance visits at hazardous waste generators.
- Issued 68 Letters of Warning and one Notice of Violation requiring actions to correct violations cited during the 145 inspections conducted.
- Received and investigated 38 citizen concerns regarding hazardous waste.

Hazardous Waste Compliance and Enforcement Efforts

- Conducted 13 inspections of commercial hazardous waste treatment/storage/disposal facilities.
- Conducted one inspection of a non-commercial hazardous waste treatment/storage/disposal.
- Conducted one focused compliance inspection.
- Conducted one case development inspection.
- Conducted two compliance assistance visits (Hazardous Waste Program-Permits Section).
- Conducted two operation and maintenance (Hazardous Waste Program-Permits Section).
- Issued three penalty negotiation offer letters.
- Worked with the Attorney General's Office to prepare two settlement agreements.
- Resolved and closed seven hazardous waste enforcement cases.
- Received eight new enforcement cases and issued two letters of intent to initiate enforcement action.

Tanks Compliance and Enforcement Unit

The new underground storage tank regulations are now in effect. The Tanks Compliance and Enforcement Unit worked with the regulated community, the Missouri Petroleum Storage Tank Insurance Fund and the Missouri Petroleum Marketers and Convenience Store Association to draft rule changes pertaining to the operational aspects of underground storage tanks.

With the rapid development of new equipment in recent years, this effort updated the underground storage tank regulations to better align with the industry of today and to help prevent future releases.

These changes also include expanded oversight authority for new tank installations, required closure for all out-of-use tank systems, better assessments for steel tanks to remain in use, more detailed reporting of underground storage tank system tests and evaluations, and clarification of vague or ambiguous language.

Unit staff continues to try to help owners, operators and contractors understand the new regulations through webinars, a new Web page, email, during inspections and through mail notifications. The unit will continue to provide outreach and assistance to those with questions.

The Environmental Protection Agency recently proposed changes to the underground storage tank regulations as well. The department is drafting comments to these proposed changes.

The Missouri Legislature recently passed a bill that initiates action by the Petroleum Storage Tank Insurance Fund for underground storage tank operator training. A member of the unit will be serving as the liaison with the fund on this project, with staff from the unit, the tanks section and other department sections providing input and support.

The department continues the effort to inspect every new tank installation. The effort has been very successful in confirming and documenting the equipment installed, ensuring installations are conducted in accordance with manufacturer requirements and industry standards and in developing a great working relationship with the companies doing the installations.

In addition to compliance and operational issues, the unit continues to use the expedited enforcement process previously approved by the Hazardous Waste Management Commission. Staff who send notification letters and prepare calls for referral to the Attorney General's Office when necessary have reduced the number of facilities without a documented financial responsibility mechanism. During October through December 2011, the tanks section referred 14 facilities with financial responsibility violations to the unit for enforcement action. Unit staff resolved nine enforcement cases, seven of which had financial responsibility violations. The unit also referred one facility to the Attorney General's Office for enforcement action for a continuing financial responsibility violation.

Polychlorinated Biphenyl Inspector

The inspector conducted 12 compliance inspections at various types of facilities throughout the state. The inspector's reports are forwarded to U.S. EPA Region 7, which has authority for taking any necessary enforcement action regarding PCBs according to the Toxic Substances Control Act.

Hazardous Waste Transporter Inspector

The inspector conducted 25 commercial vehicle inspections, during which four vehicles were placed out of service. As part of the Commercial Vehicle Safety Association's protocol, the department sends the reports to the Missouri State Highway Patrol. The transporter must certify to the patrol the violations were corrected.

The inspector also did two compliance assistance visits to commercial transporter facilities during this quarter.

The inspector sent 22 letters to companies that were inactive, unregistered or conditionally exempt small quantity generators that shipped either small or large quantities of hazardous waste. These facilities are required to register as generators with the department.

As of Dec. 31, 2011, there were 221 licensed hazardous waste transporters in Missouri.

Heartwood Acres LLC, dba Green Hill Recyclers - Laclede

Heartwood Acres LLC, dba Green Hill Recyclers, is an electronics recycling facility in Laclede. Inspectors found the facility failed to:

- Determine if waste was hazardous.
- Use a licensed hazardous waste transporter.
- Use a permitted treatment, storage or disposal facility.
- Document cathode ray tubes meet the exclusion.
- Demonstrate legitimate recycling.

The facility also operated as an unpermitted treatment, storage or disposal facility by using cathode ray tube and cathode ray tube glass in a manner constituting disposal and also performed cathode ray tube processing outside a building as required.

Missouri Department of Natural Resources - Hazardous Waste Program Compliance and Enforcement Section

As a result of the department's actions, the facility ceased accepting cathode ray tubes and disposing them in the trash and sent all cathode ray tubes and associated glass to a recycler.

The penalty was \$13,800, of which \$9,800 is suspended contingent on the facility not committing any repeat or Class I violations for two years following the effective date of the settlement agreement. The remaining penalty of \$4,000 was to be paid in four quarterly payments of \$1,000 each. However, Green Hill Recyclers submitted full payment of the up-front \$4,000 penalty with the signed settlement agreement.

Custom Auto Center - Maryland Heights

Custom Auto Center is an auto repair and maintenance facility in Maryland Heights. The facility is a conditionally exempt hazardous waste generator that failed to properly identify and manage its hazardous waste by:

- Failing to make a hazardous waste determination.
- Accumulating hazardous waste in quantities that require registration as a generator, and beyond the storage time allowed for a generator in order to accumulate a full drum.
- Failing to meet all generator requirements for management of hazardous waste and used oil.

As a result of the department's actions, the facility arranged to ship the drum of hazardous waste it had accumulated and arranged it would ship frequently enough that it would no longer accumulate regulated quantities of hazardous waste. Custom Auto Center also corrected its management of used oil.

The penalty was \$2,000, of which \$1,000 was suspended contingent on the facility not committing any repeat or Class I violations for two years following the effective date of the settlement agreement. The remaining \$1,000 penalty was paid in one check, which was sent to the Attorney General's Office.



New tank installation in Joplin, MO

2011 - A Year in Review

Each year the Permits Section coordinates with the Environmental Protection Agency to prioritize activities at facilities subject to the section's oversight. The section and EPA jointly negotiate general activity goals for the section. The Performance Partnership Grant Work Plan, an overarching plan that covers the department's air, water and hazardous waste programs, contains these general goals. The Permits Section and EPA's hazardous waste staff negotiated specific current and future goals published in a related document called the *Multi-Year Facility Planning Strategy*. These documents collectively guide the section in planning resources and executing activities for the current and future federal fiscal years.

The *Multi-Year Facility Planning Strategy* is an "idealized" document that includes goals to accomplish if the program is able to fill all of the section's staff positions and all projects go relatively smoothly. The *Multi-Year Facility Planning Strategy* is a living document. Staff routinely updates projected tasks and project completion dates for a variety of reasons, such as staff turnover and resources, facility bankruptcy, permit appeals, corrective action dispute resolution, investigation findings leading to additional work, public comments and intervening short-term priorities. The section routinely updates EPA with the status of the section's goals, updated with the most recent information available and routinely coordinates new completion dates with EPA for any delayed goals.

At the end of each federal fiscal year, the section reports to EPA about all planned and unplanned activities accomplished during the year. The report to EPA focuses primarily on permitting, corrective action and groundwater inspection and evaluation activities. The following information is from the 2011 federal fiscal year report to EPA.

Federal Fiscal Year 2011 Hazardous Waste Permitting Activities

The section coordinated, both internally and with EPA, about the priority of individual projects and tasks as dictated by the National Corrective Action Prioritization System and Overall Priority Ranking System ranking for each facility, as well as goals established by the federal Government Performance and Results Act of 1993. The section periodically revises facility rankings to reflect current environmental and state/EPA project priorities. During 2011, the section did not adjust any facility rankings, but did adjust certain priorities in response to the Government Performance and Results Act goals.

During federal fiscal year 2011, the section completed the following permitting-related activities:

- One Permit renewal: Beazer East Inc. (post-closure/corrective action).
- Ten Class 1 permit modifications without prior director approval.
- 17 Class 1 permit modifications with prior director approval.
- One Class 3 permit modification.

During federal fiscal year 2011, the section made progress on the reissuance of 15 hazardous waste management facility permits. The section also spent considerable time and resources on three hazardous waste management facility permit appeals:

- Doe Run Buick Smelter.
- Exide Technologies.
- American Airlines.

The American Airlines appeal issues were resolved and the appeal withdrawn. Though not completely resolved at the end of federal fiscal year 2011, the Exide appeal was resolved during the early part of federal fiscal year 2012. Resolving the Doe Run appeal saw progress with the hope it will be fully resolved during federal fiscal year 2012.

Federal Fiscal Year 2011 Corrective Action Activities

During federal fiscal year 2011, the section made progress on many corrective action activities related to site investigation, monitoring and remediation. The section completed one final remedy decision and one final remedy construction at Louisiana Steel in Louisiana, Missouri.

The section approved an interim measures work plan for Bayer CropScience - Kansas City and interim measures reports for the following:

- Browning Ferris Industries, Missouri City.
- Safety Kleen, St. Charles.
- Union Pacific Railroad, Sedalia.

Staff changed the planned interim measures report goal for 3M - Columbia to an interim measures remedial design work plan, which was also approved during federal fiscal year 2011.

EPA, in coordination with the States, previously developed a format for facility "ready for anticipated use" determination to demonstrate environmental progress at facilities. EPA requested the section incorporate Ready for Anticipated Use documentation preparation goals in the current Performance Partnership Grant Agreement. Staff added the commitment to prepare ready for anticipated use documentation to the Performance Partnership Grant Agreement but not the Multi-Year Facility Planning Strategy. The section continues to track ready for anticipated use status and prepare ready for anticipated use documentation for facilities during the corrective action process. The ready for anticipated use determinations are one of a continuum of ongoing EPA initiatives that are essentially an unfunded federal mandate.

The section continues to participate in monthly national EPA/State teleconferences including RCRA Reuse and Brownfields Prevention Workgroup, RCRA/TSCA Remediation, National Enforcement Strategy for Corrective Action, RCRA Info/Change Management, RCRA Permit Writers and Hazardous Waste Combustion.



Interim Corrective Measures were approved for the former BFI hazardous waste landfill.

Federal Fiscal Year 2011 Groundwater Activities

As part of the Performance Partnership Grant Work Plan, the state is obligated through its EPA hazardous waste program authorization to conduct periodic groundwater evaluations at selected hazardous waste facilities, primarily facilities with active and closed land disposal units such as landfills and surface impoundments, where groundwater contamination is present or needs monitoring to detect releases. These evaluations come in two forms; the Comprehensive Groundwater Monitoring Evaluation and the Operation and Maintenance inspection. The Comprehensive Groundwater Monitoring Evaluation is an overarching evaluation of the facility's groundwater monitoring systems and programs. The Operation and Maintenance inspection focuses on the examination of groundwater sampling plans, procedures and monitoring well maintenance issues. In each case, the section assesses compliance with the applicable groundwater monitoring regulations and permit conditions. The section continues to coordinate these evaluations with the department's Division of Geology and Land Survey and Environmental Services Program. Each evaluation includes the collection of split groundwater samples to compare and verify the results of samples collected and analyzed by the facility.

Staff typically schedule five operation and maintenance reports for each federal fiscal year. During federal fiscal year 2011, the section completed one Operation and Maintenance report originally scheduled for federal fiscal year 2009 and three 2011 Operation and Maintenance reports. There are four pending and five new operation and maintenance reports scheduled for federal fiscal year 2012.

In addition to Operation and Maintenance reports and Comprehensive Groundwater Monitoring Evaluations, the section routinely performs a detailed review of groundwater reports submitted by the facilities, using comprehensive internal checklists. These reviews identify both minor and potentially significant shortcomings with report content or project issues.

Since there has been a long history of these reviews and feedback to facilities, any shortcomings from current reviews are usually minor. Staff handles this by including the findings in the facility's next operation and maintenance report or comprehensive groundwater monitoring evaluation.

When discovered, the section sends significant issues that might influence the representative nature of samples or data, regulatory compliance or otherwise affect project progress to the facility rather than waiting until the next operation and maintenance report or comprehensive groundwater monitoring evaluation. Regulatory compliance issues are of major concern and promptly handled. During the 2011 federal fiscal year reporting period, the section completed 16 groundwater report reviews.

Financial Assurance Activities

Owners and operators of facilities actively handling hazardous waste as a permitted treatment, storage or disposal facility and facilities with post-closure care or corrective action obligations under other regulatory instruments (e.g., consent orders) are required to meet certain financial assurance and third party liability requirements. This ensures they will have enough funds set aside to close their facility, cleanup any releases of hazardous wastes or hazardous constituents and compensate third parties for bodily injury or property damage resulting from the release of those wastes or constituents, even if the facility declares bankruptcy.

The facility owners and operators submit closure, post-closure or corrective action plans, as applicable, cost estimates based on those plans and financial assurance instrument documents to the department. The section monitors the facility's financial health and conducts annual financial assurance reviews to make sure enough funding is available to cover the cost estimates for their

activities. The section's goal was to conduct 43 financial reviews by the end of federal fiscal year 2011. The section exceeded this goal by conducting 63 financial reviews. In addition to these reviews, the section conducted seven resource recovery financial assurance reviews and one in-depth cost estimate review. More information concerning financial assurance requirements is available in the March 2009 Hazardous Waste Management Commission Report, located online at www.dnr.mo.gov/env/hwp/commission/docs/hwmc-qt-rpt-2009-1st.pdf.

Data Management Activities

The section tracks, both internally and externally, all section activities and accomplishments. The section uses the Master Task List database and the Division of Environmental Quality's Permit Action Management System database to do internal tracking. External tracking is through EPA's Resource Conservation and Recovery Act Information, or RCRAInfo, database. EPA relies almost exclusively on the information entered into RCRAInfo to assess project progress and achievement of regional and national Government Performance and Results Act goals.

The section enters permitting, corrective action, financial assurance, inspection, enforcement, institutional control and GIS information into RCRAInfo for all state- and joint-lead activities. The section negotiates additional data entry obligations with EPA and outlines them in the Performance Partnership Grant Work Plan. The section typically enters data in RCRAInfo as soon as achieving a milestone or goal, but in no case more than 30 days after the event has occurred or receiving documentation regarding the event.

The section assesses the accuracy of historical state and EPA data when making new entries. The section corrects errors for State and joint database entries and forwards potential corrections for EPA's database entries to EPA's Missouri State Coordinator for reconciliation by EPA.

Other Activities

The section uses the multi-year facility planning strategy process to identify and prioritize major tasks associated with individual projects. The *Multi-Year Facility Planning Strategy* document does not capture "unplanned" activities that occur during the year. These activities can include facility-proposed permit modifications and incremental/phased work done in support of the multi-year facility planning strategy goals. Allowing substitution of some of the completed unplanned work for equivalent planned work can address federal grant requirements for formal multi-year facility planning strategy goals not completed as planned.



The work on bankruptcy issues provided funds to continue work at the former Kerr McGee Chemical LLC cresote woodtreating site in Springfield. This is a recovery well for remediation of contaminated ground water.

In addition to facility proposed permit modifications and phased/incremental work, unplanned activities include such things as facility-proposed interim measures, newly-identified Solid Waste Management Unit and area of concern investigations, ongoing involvement in national permitting and corrective action initiatives, permit modifications, state resource recovery certification and modification activities and marketing to facilities considering entry into the expedited corrective action program. The section reports all planned and unplanned activities completed or in progress to EPA in attachment to the section's comprehensive annual report.

During federal fiscal year 2011, the section worked on several issues related to facility bankruptcies, including preparing cost estimates in support of bankruptcy claims, developing agreements with facilities to perform post-bankruptcy activities using funds recovered as part of bankruptcies and providing technical support to department legal and the Missouri Attorney General's staff regarding bankruptcy-related issues. The section spent considerable time and resources on bankruptcy issues related to the following companies:

- Doe Run (formerly ASARCO) Glover Smelter.
- Greenfield Environmental Trust LLC (formerly Tronox) - Kansas City.
- Greenfield Environmental Trust LLC (formerly Tronox) – Springfield.
- U.S. Liquids (formerly City Environmental) - Kansas City.

The Missouri Department of Natural Resources' invites the public to review the list of all approved hazardous waste permit modifications for calendar year 2011. The permit modifications list is online at www.dnr.mo.gov/env/hwp/permits/publications.htm.

For more information or a hard copy of the permit modifications list, contact the department's Hazardous Waste Program at 800-361-4827. Hearing and speech impaired individuals may reach the department through Relay Missouri at 800-735-2966.

Our Missouri Waters pilot project

In November, the Missouri Department of Natural Resources announced Our Missouri Waters, a new watershed-based approach that will change the way the department conducts water resource management.

Stakeholders, partnering agencies and the public will play a critical role throughout the initiative. The department has established a Watershed Advisory Committee that will provide expertise and insight to the department as it works to develop, implement and evaluate this new approach. Working with these partners, the department will work to improve watershed planning, identify issues within watersheds and use tools best suited to address those watershed-specific issues.



Citizen participation and cooperation is also crucial for successful watershed management. "Local citizen participation is a key element to the success of Our Missouri Waters initiative. When citizens better understand the issues within their watershed, they become more invested in the future of their community and together we can develop the most effective solution to benefit the state's water resources for generations to come," said department Director Sara Parker Pauley.

The department selected three pilot watersheds to be included in the department's first phase of the Our Missouri Waters initiative. The department evaluated all watersheds throughout the state and selected Spring River watershed, Big River watershed and the Lower Grand River watershed due to their diversity and opportunities. When selecting the three pilot watersheds, the department examined issues such as water quality, water quantity, high-quality waters for preservation and local stakeholder interest.

The department will begin implementing the pilot projects in early 2012 and will continue the planning process into 2013. These pilots will allow the department to analyze how well this watershed-based approach works and to make adjustments before implementing a statewide effort expected to be launched in 2013.

The Hazardous Waste Program has long been involved with these areas, particularly through Superfund and natural resource damages activities. Staff from these programs have been and will continue to be involved in planning and implementation of the watershed-focused activities.

Big River Watershed

The Big River Watershed includes Superfund sites in St. Francois, Washington and Jefferson counties. Historic mining and milling operations, most of which were in the upper reaches of the Big River Watershed, has resulted in large chat piles and tailings impoundments covering thousands of acres. Superfund actions have been focused on stabilizing these upstream piles to reduce contaminants loading into the Big River. From 2000 to the present, eight of 12 large waste piles have been stabilized. Work on the remaining piles is ongoing and expected to be completed over the next several years. This should reduce contaminants loading to the Big River floodplain downstream of the piles, particularly in Jefferson County. Contaminants of concern are dominantly lead, zinc and other metals from the processing of metal ores. Investigation of contamination in the Big River and its floodplain is ongoing.

The Natural Resource designated Trustee (i.e., department director) is charged with assessing and restoring injured natural resources. Natural resources, which the state has trusteeship for includes, but is not limited to land, fish, wildlife, biota, air, water and supporting habitats. The Missouri Trustee Council has conducted numerous assessments in the Big River Watershed including crayfish, mussels, sediment, birds and floristic quality assessments. A number of assessment activities are ongoing.

In 2007, the Natural Resource Trustees filed a terrestrial and aquatic natural resource damages claim in the ASARCO bankruptcy, resulting in a \$40 million settlement. This settlement will be used to restore, replace, rehabilitate or acquire the equivalent of the natural resources injured as a result of the releases of heavy metals to the environment. As a result of the receipt of this settlement, the Missouri Trustee Council will develop a regional restoration plan, solicit restoration projects and oversee implementation and monitoring of projects to ensure success.

Spring River Watershed

The Spring River and its tributaries flow through, near or adjacent to areas heavily impacted by mining, including two Superfund sites in Jasper and Newton counties. Lead, zinc, and cadmium ores were mined in these areas from the mid 1800s through the late 1960s.

Chat piles, tailings, development and waste rock piles, subsidence ponds and contaminated soils are widespread. Much of the waste is highly contaminated with hazardous substances, including lead, zinc, cadmium, copper and selenium. Former underground mines have flooded exposing mineralized areas to oxygen and contaminating groundwater. All removal actions have been completed for the mine waste and residential areas and remedial actions and investigations are ongoing. Work on the Spring River Watershed will not begin until all remedial actions are completed in Jasper and Newton counties. An overbank sediment deposition study has been planned for the Spring River in 2012. Data about sediment and aquatic life continues to be collected by various agencies as part of the investigation of the watershed to determine the best course of action for remediation of the Spring River and its tributaries.

The Missouri Trustee Council has conducted numerous assessments in the Spring River Watershed including crayfish, sediment and bird assessments. A number of assessment reports are nearing completion.

In 2007, the Natural Resource Trustees filed a terrestrial and aquatic natural resource damages claim in the ASARCO bankruptcy, resulting in a \$20 million settlement. This settlement will be used to restore, replace, rehabilitate or acquire the equivalent of the natural resources injured as a result of the releases of heavy metals to the environment. As a result of the receipt of this settlement, the Missouri Trustee Council is developing a regional restoration plan and will release the plan for public comment in the near future. The Trustee Council will also solicit proposals and oversee implementation and monitoring of restoration projects.

Annual Underground Storage Tank, or UST, Sources and Causes Report

Subsection (c) of Section 1526 of the Energy Policy Act amends Section 9002 in Subtitle I of the Solid Waste Disposal Act to add requirements for states to maintain, update and make available to the public a record of underground storage tanks regulated under Subtitle I. The Environmental Protection Agency requires each state receiving funding under Subtitle I to meet the public record requirements. Subsection (d) of Section 9002 in Subtitle I requires EPA to prescribe the manner and form of the public record and says the public record of a state must include:

1. The number, sources and causes of underground storage tank releases in the state.
2. The record of compliance by underground storage tanks in the state with Subtitle I or a state program approved under Section 9004 of Subtitle I.
3. Data on the number of underground storage tank equipment failures in the state.

The Missouri Department of Natural Resources' Tanks Section *Annual Public Record Report* for the period of Oct. 1, 2010, through Sept. 30, 2011 was completed in December 2011. The department has placed this report on the Tanks section website at dnr.mo.gov/env/hwp/tanks/tanks.htm. The report is located under the quick links. This report will also be made available by request to those that do not have Internet access.

The first section of the report describes the number of underground storage tank facilities, individual regulated tanks, compliance rates in Missouri and an individual breakdown of the sources and causes of releases opened in federal fiscal year 2011.

Tanks Accomplishments for 2011

The Tanks section held the fourth annual UST workshop as part of the Missouri Waste Coalition Conference in June. The topic of the workshop was the Ricker Method of Plume Stability and other comment tank related reporting issues. Compliance and Enforcement also held a one day workshop about compliance as part of the conference.

The section completed the American Recovery and Reinvestment Act Abandoned Sites Project Final Report in April 2011. The section conducted site investigation and cleanup activities at several abandoned underground storage tank sites. The department sent out a total of 66 projects to consultants on the contract through the recovery act project. The consultants have completed all contracted work at the sites. The department is currently at 100 percent obligated and 100 percent spent. The project was completed approximately 12 months prior to the grant guideline deadline of September 2011.

The section continued an expedited review process ensuring that remediation reviews of high priority sites are completed in a timely manner.

The section continued an initiative for closing tank sites open for more than 20 years. The goal is to help provide additional information to the consultant to facilitate completion of these projects and help to achieve no further action status for these sites.

With co-operation between the department's tanks section and the Division of Geology and Land Survey, the department finished an investigation into the source of MTBE contamination previously discovered within the city of Miner's public drinking water supply system. The source appears to have been an old gas station that has been investigated, remediated and a no further action issued. The city will continue to monitor for impacts, but the investigation will be closed.

The Tanks Section continues to investigate drinking water contamination in Portageville and will conduct an investigation to determine the source of contamination.

Missouri Department of Natural Resources - Hazardous Waste Program Tanks Section

In Potosi, the section is currently determining the source of drinking water contamination. The section is working to try to help people with a filter to provide safe drinking water.

The section applied for and received a grant of \$94,000 to work with communities along historic Route 66 to provide assessments of abandoned gasoline stations for petroleum contamination. This would consist of Phase I and Phase II environmental assessments.

The section applied for and received a grant of \$43,000 to conduct cleanup activities at seven former gasoline stations previously investigated with recovery act funds for which a responsible party does not exist. At these sites, action by the department is necessary to mitigate unacceptable human health and environmental risks posed by petroleum underground storage tanks on the sites. This project would fund work by the department and the departments hired contractors to reduce risks associated with these sites.

The section continued to refine the system for tracking financial responsibility to identify sites that previously could have fallen through the cracks. A compliance rate of 98.2 percent was achieved for facilities with acceptable financial responsibility. Met with the attorney general's office to further to refine this system to help provide them with tracking information to speed up the process on their end.

The section worked on developing an Automated Registration Form. After the form is finished the user will be able to generate a prefilled registration from a button in the tanks database. This feature will be of great assistance to both department staff and the public.

Locational data has been improved due to ongoing efforts of Geocoding and mapping reviews. Approximately 80 percent of all tank sites have adequate coordinates

The section generated, processed and mailed the large fee cycle invoices for 2010 - 2015. Extra effort was made to reach the facilities and owners. Out of 321 invoices, only two facilities still have a balance due, resulting in a success rate of revenue collection of 99.4 percent.

Remediation mail was added to the sections tracking system to ensure correspondence is dealt with in a prompt and consistent manner. This tracking system is directly linked to the mail log so as soon as the mail is received and entered the project manager is immediately notified

The section continued a temporary closure initiative aimed at ensuring non-upgraded tanks are not in temporary closure beyond the 12 months allowed. This has led to permanent closure at many of these sites and a reduction of temporary closed tanks.

The section continues to participate in an historic highways revitalization project and has identified several opportunities in Missouri for EPA targeted Brownfields assessments.

The section produced the fourth annual *Public Record Report* to EPA in December 2011. This report includes the sources and causes of releases of tanks in Missouri.

The section continued participation on the Underground Storage Tank Association of State and Territorial Solid Waste Management Officials, or ASTSWMO, Federal Rulemaking Group. This group is tasked with providing regulatory and state input into rulemaking involving federal UST regulations.

The section continued participation on ASTSWMO UST Task Force. This task force is responsible for providing the states viewpoint to EPA about tank issues. Also as a task for this responsibility, the tanks section continued to participate in the ASTSWMO Program Information Exchange Committee to help plan ASTSWMO meetings.

Missouri Department of Natural Resources - Hazardous Waste Program Tanks Section

Tanks Section

The section's Laura Luther continued to participate in the ASTSWMO Leaking Underground Storage Tank, or LUST, Task Force. This task force is responsible for providing the states viewpoint to EPA about tank cleanup issues.

The section participated in the planning of a LUST/State Fund Workshop in Chicago in September 2011.

Staff continued use of contractors to help reduce turn-around times and conduct additional remediation reviews.

Over the last two years, the section has reduced average remediation document review times from 96.4 days to approximately 36 days.

During calendar year 2011, the department accomplished the following work related to petroleum storage tanks:

- Properly closed 363 tanks.
- Reviewed 183 closure reports.
- Approved 103 closure notices.
- Conducted 47 closure inspections.
- Conducted four site investigations.
- Responded to 17 emergencies involving petroleum releases.
- Oversaw completion of 143 remediation sites.
- Issued 311 certificates of registration.
- Remediation staff received 1,833 remediation documents and generated 1,791 response letters.
- Staff received notification about 68 new installations at tank sites and 39 new site registrations.
- Financial responsibility compliance was at 98.2 percent. This number reflects insurance coverage from both the Petroleum Storage Tank Insurance Fund and other private policies and statements.
- The department currently regulates 3,572 facilities with 9,388 active underground storage tanks.

Petroleum Storage
Tanks Regulation
September 2011

Staff Productivity	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	TOTAL
Documents received for review	189	194	153	168	188	162	0	0	0	0	0	0	1,054
Remediation documents processed	137	159	171	165	144	171	0	0	0	0	0	0	947
Closure reports processed	14	8	11	8	8	4	0	0	0	0	0	0	53
Closure notices approved	9	6	2	7	11	10	0	0	0	0	0	0	45
Tank installation notices received	10	5	5	10	3	0	0	0	0	0	0	0	33
New site registrations	3	1	2	0	3	2	0	0	0	0	0	0	11
Facility Data													
Total active and closed USTs	40,222	40,236	40,261	40,267	40,299	40,320	0	0	0	0	0	0	
Total permanently closed USTs	30,808	30,839	30,878	30,904	30,925	30,930	0	0	0	0	0	0	
USTs active and temporarily closed	9,412	9,395	9,395	9,375	9,386	9,388	0	0	0	0	0	0	
USTs in temporary closure	870	853	834	817	819	821	0	0	0	0	0	0	
Total hazardous substance USTs	395	395	395	395	395	395	0	0	0	0	0	0	
Facilities with active USTs	3,578	3,568	3,569	3,566	3,569	3,572	0	0	0	0	0	0	

Closures

Underground Storage Tanks	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	TOTAL	All Yrs
Closure Reports Reviewed	14	8	11	8	8	4	0	0	0	0	0	0	53	
Closure Notices Approved	9	6	2	7	11	10	0	0	0	0	0	0	45	
Number of Tanks Closed (Closure NFA)	23	48	57	29	21	15	0	0	0	0	0	0	193	

Cleanup

Underground Storage Tanks	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	TOTAL	All Yrs
UST release files opened this month	2	2	3	1	0	0	0	0	0	0	0	0	8	6,268
UST cleanups completed this month	4	15	21	5	6	8	0	0	0	0	0	0	59	5,434
Ongoing UST cleanups	864	851	834	830	827	816	0	0	0	0	0	0		
Aboveground Storage Tanks														
AST release files opened this month	0	1	0	0	0	0	0	0	0	0	0	0	1	414
AST cleanups completed this month	1	0	6	1	0	1	0	0	0	0	0	0	9	250
Ongoing AST cleanups	168	170	164	163	164	164	0	0	0	0	0	0		
Both UST and AST														
Total release files-both UST & AST	0	0	0	0	0	0	0	0	0	0	0	0	0	74
Cleanups completed-both UST & AST	0	0	0	0	0	1	0	0	0	0	0	0	1	43
Ongoing cleanups-both UST & AST	31	31	31	31	31	30	0	0	0	0	0	0		
Unknown Source														
Total release files-unknown source	3	6	3	5	2	5	0	0	0	0	0	0	24	310
Cleanups completed-unknown source	1	2	1	1	3	0	0	0	0	0	0	0	8	197
Ongoing cleanups-unknown source	110	113	113	115	111	116	0	0	0	0	0	0		
Documents Processed	137	159	171	165	144	171	0	0	0	0	0	0	947	
ed Remediation Cases	0	0	0	0	1	0	0	0	0	0	0	0	1	78

Effective December 2008 tanks with unknown substance will be included in total figures. Some measures are re-calculated each month for all previous months to reflect items added or edited after the end of the previous reporting period.